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25865
S/020/61/139/004/025/025
B103/B220

AUTHORS: Musayelyan, S. S., and Sytinskiy, I. A.

TITLE: Effect of total X-radiation on the level of γ -aminobutyric acid in the brain

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 139, no. 4, 1961, 994 - 995

TEXT: This paper was read at the session of the sektsiya biokhimii Leningradskogo obshchestva fiziologov, biokhimikov i farmakologov im. I. M. Sechenova (Section of Biochemistry of the Leningrad Society of Physiologists, Biochemists, and Pharmacologists imeni I. M. Sechenov) on November 17, 1960. The authors studied the level of γ -aminobutyric acid (GABA) in the brain of white rats treated totally with X-ray doses of 400, 800, and 1000 r. The conversion of GABA is important for estimating the effect of nervous regulation in radiation disease. An $\text{AM}-3$ (RUM-3) apparatus was used. The animals irradiated were frozen totally in liquid oxygen 2, 3, 4, 6, 8, 9, 10, and 11 days after exposure. The cerebral tissue was treated according to E. Roberts, S. Frankel (J. Biol. Chem., 187, 55 (1950)). GABA was determined quantitatively by chromatography on paper. The system: n-butyl alcohol - acetic acid - water (4 : 1 : 5)

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Effect of total...

served as flow medium. Extracts from cerebral tissue were plotted together with standard solutions of GABA of different concentrations on the same chromatogram. Professor E. Roberts, Duarte, California, is thanked for supplying the GABA preparation. The optical density of the solution of the copper ninhydrine complex of GABA was determined at 512 m μ with an CQ-4 (SF-4) spectrophotometer. Results show that individual variations of the GABA content in cerebral hemispheres of non-exposed rats are insignificant: 16.2 - 20.4 mg-%, average of 12 tests: 18.9 ± 1.28 mg-%. Table 1 shows the GABA level in the brain of irradiated rats. It is presumed that the effect of the dose of 800 r is due to the inhibited state of the central nervous system, which attains its maximum on the third or fourth day. Possibly, this is connected with the increased content of GABA in the cerebral tissue. It was proved (Kh. S. Koshtoyants, T. M. Turpayeva, D. Ye. Ryvkina, Sessiya AN SSSR po mirnomu ispol'zovaniyu atomnoy energii (Session of the AS USSR on the peaceful use of atomic energy) Zased. otdel. biol. nauk, 1955, p. 289) that glycolysis is intensified due to ionizing radiation, i. e., simultaneously with the obstruction of oxygen utilization by the cerebral tissue, and the start of hypoxia. These processes may reduce the pH-value of the cerebral

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Effect of total...

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tissue. This, however, increases the activity of decarboxylase of glutamic acid in the brain, and favors the accumulation of GABA. It is suggested in this connection that the increase of the GABA content in the brain caused by total X-radiation represents a defensive reaction favoring the development of the inhibition of the central nervous system. There are 1 table and 10 references: 5 Soviet-bloc and 5 non-Soviet-bloc. The two most important references to English-language publications read as follows: K. F. Killam, Federat. Proc., 17, 1018 (1958); K. A. C. Elliott, H. H. Jasper, Physiol. Rev., 39, 383 (1959). A third one is given in the body of the abstract.

ASSOCIATION: Institut fiziologii im. I. P. Pavlova Akademii nauk SSSR.
(Institute of Physiology imeni I. P. Pavlev of the Academy of Sciences USSR)

PRESENTED: March 25, 1961 by V. N. Chernigovskiy, Academician

SUBMITTED: March 17, 1961

Card 3/4

MYUL'BERG, A.A.; SYTINSKIY, I.A.; CHAYKA, T.V.

Electrophoretic separation of soluble proteins in tumors of the
human brain. Vop.med.khim. 8 no.1:58-64 Ja-F '62. (MIRA 15:11)

1. Laboratoriya khimii belka Leningradskogo gosudarstvennogo
universiteta imeni A.A.Zhdanova, i patologoanatom cheskaya
laboratoriya Instituta neyrokhirurgii imeni A.L.P lenova,
Leningrad.

(BRAIN--TUMORS) (PROTEINS) (ELECTROPHORESIS)

SHATUNOVA, N.F.; SYTINSKIY, I.A.

The effect of semicarb :zide poisoning on the content of
 γ -aminobutyric acid in brain tissues. Nerv. sist (Leningrad)
2 no.3:12-16 '62. (MIRA 17:7)

1. Laboratoriya khimii belka Fiziologicheskogo instituta imeni
Ukhtomskogo Leningradskogo gosudarstvennogo universiteta.

OSTRETSOVA, I.B. (Leningrad); SYTINSKIY, I.A. (Leningrad)

Decarboxylase of glutamic acid. Ukr. biokhim. zhur. 34 no.3:456-
474 '62. (MIRA 18:5)

BATUYEV, A.S.; SYTINSKIY, I.A.

Effect of gamma-aminobutyric acid on the strychnine-induced
potential of the cerebral cortex. Dokl. AN SSSR 147 no. 5:1242-
1243 D '62. (MIRA 16:2)

1. Fiziologicheskiy institut im. A.A. Ukhomskogo Leningradskogo
gosudarstvennogo universiteta im. A.A. Zhdanova. Predstavлено
akademikom V.N. Chernigovskim.
(BUTYRIC ACID) (STRYCHNINE—PHYSIOLOGICAL EFFECT)
(ELECTROENCEPHALOGRAPHY)

VERESHCHAGIN, S.M.; SYTINSKIY, I.A.; TYSHCHENKO, V.P.

Blocking effect of gamma-aminobutyric acid on the central
synapses of insects. Nerv. sist. no.4:108-110 '63

(MIRA 18:1)

1. Fiziologicheskiy institut Leningradskogo universiteta.

BATUYEV, A.S.; VASIL'YEVA, L.A.; SYTINSKIY, I.A.

Effect of gamma-aminobutyric acid on strychnine-induced and evoked potentials, and on direct excitation of the cerebral cortex. Nerv. sist. no.4:111-115 '63 (MIR 18:1)

1. Fiziolicheskiy institut Leningradskogo universiteta.

ACCESSION NR: AT3013136

S/3018/63/000/000/0163/0173

AUTHOR: Sytinskiy, I. A.; Avenirova, Ye. L.; Dement'yeva, S. P.;
Ostretsova, I. B.; Priyatkina, T. N.

TITLE: Gamma aminobutyric acid in animal brains during radical
acceleration and narcotic sleep

SOURCE: Tret'ya Vsesoyuznaya konferentsiya po biokhimii nervnoy
sistemy*. Sbornik dokladov. Yerevan, 1963, 163-173

TOPIC TAGS: gamma aminobutyric acid level, aminobutyric acid,
glutamic acid decarboxylase activity, radial acceleration, cortex
inhibition, amyta sodium, chromatography, electrophoresis,
electroencephalogram, central nervous system, beta oxidation

ABSTRACT: In the first of two series of experiments the level of
gamma aminobutyric acid and the activity of its enzyme, glutamic acid
decarboxylase, were determined in rats in relation to functional
activity of the central nervous system under conditions of strain.
In the second series they were determined in relation to the
functional state of the cortex inhibited by amyta sodium. For the
first series animals were subjected to radial acceleration of 23, 33,

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ACCESSION NR: AT3013136

and over 39 g on a centrifuge and then frozen in liquid oxygen. After the brains were removed, they were divided into large hemispheres and cerebellum for extract preparation by Robert's method. Amino acids were separated by chromatography and electrophoresis. Glutamic acid decarboxylase activity in the large hemispheres was measured by Barburg's manometric method. For the second series animals were injected subcutaneously with amyta sodium to induce narcotic sleep and then were frozen in liquid oxygen. Electroencephalograms were made before and after injections. Findings show that gamma aminobutyric acid and its enzyme take part in the resistance processes of the organism under heavy strain. Increase in gamma aminobutyric acid level with radial acceleration of 33 g appears to be a protective reaction which contributes to inhibition of the central nervous system. In animals with induced inhibition of the cerebral cortex, gamma aminobutyric acid level is reduced when brain biopotentials are sharply depressed. To compensate for this reduction, beta oxidation of the gamma aminobutyric acid takes place and beta-oxygamma-aminobutyric acid forms. This is reduced when the animal awakens. Orig. art. has: 3 figures, 3 tables.

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ACCESSION NR: AT3013136

ASSOCIATION: Laboratoriya khimii belka fiziologicheskogo
instituta im. A. A. Ukhomskogo Leningradskogo universiteta,
(Protein Chemistry Laboratory of the Physiological Institute,
Leningrad University)

SUBMITTED: 00

DATE ACQ: 280ct63

ENCL: 00

SUB CODE: AM

NO REF SOV: 012

OTHER: 029

Card 3/3

SOTNIKOVA, A.P.; SYTINSKIY, I.A.

Effect of whole-body X-ray irradiation on the gamma-amino
butyric acid content of brain tissue. Radiobiologija 3
no.4:504-507 '63. (MIRA 17:2)

1. Leningradskiy gosudarstvennyy universitet im. A.A.
Zhdanova.

BUZHINSKAYA, A.V.; VERESHCHAGIN, S.M.; SYTINSKIY, I.A.

Effect of hydrazide poisoning on the γ -aminobutyric acid content
in the brain. Vest. LGU 18 no. 3:140-142 '63. (MIRA 16:2)
(HYDRAZIDES) (BUTYRIC ACID) (BRAIN)

SYTINSKIY, I.A.; PRIYATKINA, T.N.

Effect of a number of pharmacological substances on the γ -butyric acid content of the central nervous system. Ukr. biokhim. zhur. 'MIRA 17:9)
35 no.2:202-206 '63.

I. A.A.Ukhtomsky Physiological Institute of Leningrad University.

VERESHCHAGIN, S.M.; SYTRINSKIY, I.A.; TYSHECHENKO, V.P.

Effect of gamma-aminobutyric acid on giant nerve fibers in the earthworm. Fiziol. zhur. 49 no.7:879-881 Jl '63.
(MIRA 17:11)

~, Fiziologicheskiy institut imeni Ukhтомskogo Gosudarstvennogo
universiteta, Leningrad.

L 17790-65 EWG(j)/EWG(r)/EWT(1)/FS(v)-3/ENG(v)/EWG(a)/EWG(c) Pb-L/Pe-5
AEDC(a)/AFWL/ASD(a)-5/AMD/AFETR/AFTC(b) DD

ACCESSION NR: AP5000263

S/0301/64/010/0C6/0595/0600

AUTHOR: Avenirova, Ye. D.; Savin, B. M.; Sytinskiy, I. A. B

TITLE: The influence of hypoxia and acceleration on the content of glutaminic and gamma-aminobutyric acids in brain tissue

SOURCE: Voprosy* meditsinskoy khimii, v. 10, no. 6, 1964, 595-600

TOPIC TAGS: acceleration, hypoxia, brain metabolism, glutaminic acid, gamma aminobutyric acid, rat, brain tissue

ABSTRACT: Tests were conducted on 59 white rats weighing 120—200 gm. Accelerations took place on a centrifuge with a radius of 1.2 m. Rats were kept in a fixed position in containers on the ends of the centrifuge arms. The maximum acceleration, 18 g, was maintained for 1 min. This was followed 2—3 sec later by immediate quick freezing in nitrogen. Hypoxia tests took place in a pressure chamber 0.6 m in size. Animals were subjected to simulated altitudes of 5000 m (81 mm Hg), 10,000 m (40 mm Hg), and 15,000 m (18 mm Hg). The three stages of hypoxia were classified as compensating (Stage I) and non-compensating (Stages II & III). The duration of exposure to hypoxia

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L 17790-65

ACCESSION NR: AP5000263

was either 1 min or 30 sec. The rate of "climb" and "fall" was 50-75 m/sec. Animals were quick frozen in liquid nitrogen 3-10 sec following the test. Qualitative determination of free amino acids in brain tissue was accomplished by paper chromatography. Chromatograms were placed in a chamber for 48 hr to obtain gamma aminobutyric and glutaminic acids, and for 60 hr to obtain aspartic acid. It was found that hypoxia produced by 1-min exposures to 5000 and 10,000 m increased the content of gamma aminobutyric acid in the cerebral hemispheres by 30% and in the cerebellum by 40%, as compared to the controls. Particularly large increases were observed during acute hypoxia (15,000 m) accompanied by deoxygenation. Accelerations of 18 g did not alter the content of brain gamma-aminobutyric acid. It was concluded that these variations between the content of gamma-aminobutyric acid in brain tissues produced by acceleration and acute hypoxia reflect the difference in the mechanisms which produce these changes. Orig. art. has: 2 tables.

ASSOCIATION: Laboratoriya khimii belka Leningradskogo universiteta
(Laboratory of Protein Chemistry, Leningrad University); Kafedra
aviatsionnoy meditsiny* Voyenno-meditsinskoy ordena Lenina Akademii

Card

2/3

L 17790-65

ACCESSION NR: AP5000263

imeni S. M. Kirova, Leningrad (Department of Aviation Medicine, Military Medical Academy)

SUBMITTED: 27Aug63

ENCL: 00

SUB CODE: PH, LS

NO REF SOV: 013

OTHER: 008

ATD PRESS: 3153

Card 3/3

SYTINSKIY, I.A.

Problems of biochemistry at the symposium on physiological,
biochemical and pharmacological effects of γ -aminobutyric
acid in the nervous system. Vop. med. khim. 10 no.6:640-641
(MIRA 19:1)
N-D '64.

PETROVA, S.O.; KOMKOVA, A.I.; SYTINSKIY, I.A.

Study of the conditions for glutamic acid decarboxylase extraction
from the acetone powders of brain tissue. Vest. LGU 19 no.15:141-
144 '64. (MIRA 17:11)

NGUYEN TRUNG KHUAN; SYTINSKIY, I.A.

Content of free glutamic and gamma-aminobutyric acids in the gray and white substance of various cerebral segments in the monkey. Ukr. biokhim. zhur. 36 no.1:67-71 '64.

(MIRA 17:12)

1. Khanovskiy universitet, Demokraticheskaya Respublika V'yetnam.
2. Leningradskiy universitet (for Sytinskiy).

DO FIZIOL. I. A. KARAEV, I.A.

Effect of gamma-aminobutyric acid and picrotoxin on Sechenov's inhibition. Fiziol. zhur. 50 no.12:1434-1436 D '64. (MIRA 28:9)

A. Krasnoyarskiy universitet Demokraticeskaya Republika V'yetnama.

BATUTEV, A.S.; SYTINSKIY, I.A. (Leningrad)

Physiological effects of γ -aminobutyric acid in the central nervous system of vertebrates. Usp. sovr. biol. 59 no.1:128-144 Ja-F '65.

(MIRA 18:3)

L 62113-65

ACCESSION NR: AP5010350

UR/0205/65/005/002/0268/0271

AUTHOR: Lyong Tan Chyong; Nguyen Khyu Chan¹; Lyong Tan Tkhan¹; Nguyen Tkhi Thinh¹; Sytinckiy, I. A.

TITLE: Hematological and chemical blood analyses of various brain sections in monkeys following gamma-irradiation

SOURCE: Radiobiologiya, v. 5, no. 2, 1965, 268-274

TOPIC TAGS: animal, monkey, gamma ray irradiation, single radiation dose, irradiation effect, brain tissue, gamma amino butyric acid, glutamic acid, amino acid, peripheral blood, spleen, cerebellum, cerebral cortex, histology, hematology

ABSTRACT: Eight monkeys (Macaca mulatta Zimmerman) ages 1-2 yrs weighing 1.5 kg were gamma-irradiated (GJM-500-400 unit, focal length 60 cm, 18 r/min) with single 800 r doses to determine glutamic acid and gamma amino butyric acid levels in different brain tissues, peripheral blood changes, and histological changes of the brain and spleen. Complete blood analyses were made and protein fractions were determined by paper electrophoresis in 2 control animals before irradiation, and in pairs of animals killed 1 hr, 1 day, and 3 days following irradiation.

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L 62113-65

ACCESSION NR: AP5010350

Gray and white matter tissues were taken from the frontal, occipital, parietal, and temporal areas of the large hemisphere cortex and cerebellum to measure glutamic acid and gamma amino butyric acid levels by chromatographic and spectrophotometric methods. Histological investigations of the spleen, cerebellum, and large hemisphere cortex tissues were made. Findings indicate that the hematological indices of animals irradiated with an 800 r dose are typical for peripheral blood changes during radiation sickness. Protein fraction changes of blood plasma are characterized by decreased albumin levels and increased alpha- and beta-globulin levels. Distribution of gamma amino butyric acid and glutamic acid in the brain tissues shows that the gamma amino butyric acid level of the gray matter in the large hemisphere cortex drops immediately after irradiation, and then increases after 3 days. The glutamic acid level is characterized by a gradual decrease with the development of radiation sickness. Comparison with literature data indicates that hematological indices of peripheral blood and

radiological experiments. Orig. Eng. 3 figures.

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L 62113-65
ACCESSION NR: AP 5010350

ASSOCIATION: Khanovskiy universitet Demokraticeskoy Respubliky Vietnam (Hanoi University, Vietnam Democratic Republic); Institut radiologii Demokraticeskoy Respubliky (Institute of Radiology, Vietnam Democratic Republic); Bol'nitsa Bak-Mav (Bak-Mav Clinic, Vietnam Democratic

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001654320012-7

republic); Leningradskiy universitet (Leningrad University)

SUBMITTED: 13Sep63

ENCL: 00

SUB CODE: IS

NR REF Sov: 010

OTHER: 007

Card 3/3

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001654320012-7"

L 51821-65

ACCESSION NR: AP5017108

UR/0239/G4/050/012/1434/2436
14
B

AUTHOR: Do Kong Khun'; Sytinskiy, I. A.

TITLE: Effect of gamma-aminobutyric acid and picrotoxin on Sechenov inhibition

SOURCE: Fiziologicheskiy zhurnal SSSR, v. 50, no. 12, 1964, 1434-1436

TOPIC TAGS: brain, experiment animal, biochemistry, amino acid, poison effect, toxicology, neurology

ABSTRACT: The article describes research on Sechenov inhibition in response to stimulation of the thalamus opticus with gamma-aminobutyric acid and picrotoxin. The experiments were performed on 66 frogs. The latent period of reflex reaction increased from 7-8 to 10-11 seconds, i.e., about 40%, with application of gamma-aminobutyric acid. The increase was approximately the same for all concentrations of the acid, though normalization of reaction time did depend on concentration. Picrotoxin had no effect on the latent period of the reflex of the spinal cord when applied to the thalamus opticus. Orig. art. has: 1 figure.

Card 1/2

L 51824-65

ACCESSION IR: AP5017108

ASSOCIATION: Khanovskiy universitet, DRV (Hanoi University, DRV); Sytinskiy
Leningradskiy gosudarstvennyy universitet im. A. A. Zhdanova (Leningrad State
University)

SUBMITTED: 15Aug63

ENCL: 00

SUB CORR: LS

NR REF Sov: 003

OTHER: 007

JPRS

QD
Card 2/2

NIKON VAKH TIKHIN, SINYINSKIY, I.A.

Effect of barbiturates and in the brain of monkeys in species related
by physiologist, Vog., med., Khim. i) no. 11-14 Jan-F 1958.
(MTRR 18310)

I. Rostovskiy universitet, Demokraticheskaya Respublika,
Vlyadzovna i. Leningradskiy gosudarstvennyy universitet.

L 24759-66

ACC NR: A16015549

SOURCE CODE: UR/0221/65/059/001/0128/0144

AUTHOR: Batuyev, A. S. (Leningrad); Sytinsky, I. A. (Leningrad)

ORG: none

TITLE: Physiological action of gamma-aminobutyric acid in the central nervous system
of vertebrates

SOURCE: Uspekhi sovremennoy biologii, v. 59, no. 1, 1965, 128-144

TOPIC TAGS: central nervous system, cerebral cortex, amino acid, reflex activity, neurophysiology, cat, rat, conditioned reflex

ABSTRACT: Isolation of gamma-aminobutyric acid (GABA) from the brain of human beings and animals only induced considerable interest in the role of this substance in the functional activity of the central nervous system. It was established that GABA is identical with the inhibiting factor (I-factor) and that it is counteracted by strychnine (just as acetylcholine is counteracted by atropine). In experiments on cats, thiosemicarbazide counteracted the inhibiting effect of GABA on spinal reflexes. The relations between GABA and other substances exerting an inhibiting action in the brain (gamma-aminobutyrylcholine, gamma-guanidinebutyric acid, gamma-aminobutyrylhystidine, etc.), which are apparently derived from GABA and are converted into it, were subjected to study. The mechanism of the synaptic action of GABA was

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S. 24750-66

ACC NR: AP6015549

investigated experimentally. Its action on conditioned reflexes was studied. L. Chiosa et al (Studii si Cercetari, 21, 1959) found that parenteral administration of GABA to rats inhibited conditioned defense reactions and suppressed posture reflexes. Batuyev et al established that injection of GABA into the occipital part of the cerebral cortex of cats inhibited conditioned motor feeding reflexes associated with activities of the visual and auditory analyzers. Since the conference on GABA held in the US in 1959, research on the action of this compound and problems related to this action has expanded considerably. This is demonstrated by the information on the functional role of GABA and experimental and clinical data pertaining to it which were presented at the All-Union symposium on the subject held in 1964 at Leningrad. [JPRS]

SUB CODE: 06 / SUBM DATE: none / ORIG REF: 022 / OTH REF: 086

Card 2/2 UVF

L-1967-67 ATT(1) SOTB D-1/31
ACC NR: A10036669

SOURCE CODE: U.A/0000/65/000/000/0359/0360

33

AUTHOR: Sytinskiy, I. A.; Avenirova, Ye. L.

ORG: none

TITLE: Gamma-amino-butyric acid system in the brain of animals during exposure to acceleration [Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24-27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966, Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 359-360

TOPIC TAGS: biologic acceleration effect, gamma-aminobutyric acid, animal physiology, hematoencephalic barrier, blood chemistry

ABSTRACT:

An investigation of the gamma-aminobutyric acid (GABA) system to reveal the mechanism of central nervous system disruption during acceleration is of interest because this acid has an inhibitory effect on brain cortex bioelectricity. The effects of head-pelvis and pelvis-head accelerations (18 and 25 G) on the GABA content and its enzymatic activity were studied in white rats. The following enzymes were used: glutamate-decarboxylase-GDC and aminoferase; GABA- α -ketoglutamic acid-GABA-

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L C8847-67

ACC NR: A10036669

aminoferase. The content of GABA was determined chromatographically. The activity of GDC and GABA aminoferase was determined as a function of the increase of end products of the enzyme reaction after incubation at a temperature of 37°C in a nitrogen atmosphere.

It was found that accelerations did not alter the GABA system. A study of hematoencephalic barrier permeability showed that an intraperitoneal injection of GABA in doses of 50-250 mg/100 g did not increase its level in the brain. An increase in the level of GABA in the brain occurred when it was injected parenterally after exposure to acceleration which disrupted the hematoencephalic barrier. The activity of GABA metabolic enzymes in the brains of animals when injected with large doses of substrate remained within normal limits. The hematoencephalic barrier effectively prevented the GABA infiltration. Acceleration resulted in a disruption of the hematoencephalic barrier accompanied by the development of central nervous system depression due to the GABA penetration. This means that the central mechanisms of nervous activity might possibly be directly affected during acceleration. *N. A. no. 22; ATD Report 66-1167*

SUB CODE: 06 / SUBM DATE: 00May66

Card 2/2

ACC NR: AP7001879

SOURCE CODE: UR/0300/66/038/006/0590/0595

AUTHOR: Sytinskiy, I. A.; Avenirova, Ye. L.

ORG: Leningrad State University im. A.A. Zhdanov (Leningradskiy gosudarstvennyy universitet)

TITLE: The gamma-aminobutyric acid (GABA) system in the brain of animals during acceleration

SOURCE: Ukrayins'kyj biokhimichnyj zhurnal, v. 38, no. 6, 1966, 590-595

TOPIC TAGS: biologic acceleration effect, tissue physiology, GABA, gamma aminobutyric acid, central nervous system, brain physiology, brain biochemistry, hematoencephalic barrier

ABSTRACT: The authors studied the effect of head-pelvis accelerations (25 G) on the amount of gamma-aminobutyric acid (GABA) and the activity of the GABA-metabolizing enzymes glutamate decarboxylase (GDC-ase) and GABA- α -ketoglutaric acid (GABA-aminopherase) present in rat-brain tissue. Rats weighing 120—200 g were rotated on a centrifuge with a radius of 1.2 m. Rats were subjected to 25 G for 30 sec four times in 3 min and placed in liquid nitrogen within 2 to 3 sec after the centrifuge stopped. Brain tissues were processed by paper chromatography to determine GABA content. GDC-ase activity was determined by finding the increase in GABA due to decarboxylation of L-glutamic acid in brain homogenate from rats decapitated immediately after centrifugation, incubated with glutamic acid for 30 min at 37°C.

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UDC: 577.1:612.8.015

ACC NR: AP7001879

GABA-aminopherase activity was found by cooling the rat-brain homogenate to 4—5°C with a mixture of GABA and α-ketoglutaric acid, then determining the increase in glutaminic acid. It was found that: 1) the GABA content and activity of GABA-metabolizing enzymes remained normal in the brain of rats immobilized for 3 min in the centrifuge biocontainer but not exposed to acceleration. 2) GABA content and enzyme activity were likewise unchanged in the brain of rats exposed to 3 min of head-pelvis acceleration of the order of 25 G. 3) Brain GABA level did not increase following intraperitoneal injection of GABA (50—250 mg/100 g body weight), owing to nonpermeability of the blood-brain barrier. When intraperitoneal GABA (150 mg/100 g) was accompanied by dilanthine (5 mg/100 g), and when larger doses (over 500 mg/100 g) of intraperitoneal GABA were given alone, the blood-brain barrier was overcome and brain GABA levels rose. 4) Acceleration (25 G) following intraperitoneal injection of GABA (150—200 mg/100 g) resulted in a 100% to 150% increase in brain GABA levels. 5) Activity of the GABA-metabolizing enzymes GDC-ase and GABA-aminopherase remained normal in all experiments. Orig. art. has: 4 tables.

[DP]

SUB CODE: 05, 06/ SUBM DATE: 06Jun65/ ORIG REF: 011/ OTH REF: 006/ ATD PRESS: 5110

Card 2/2

DEM'YANCHENKO, G.P.; MORDASOV, P.M.; BITYUKOV, P.L.; KREBTOVICH, Ie.G.;
MALEVSKIY, A.D., veterinarnyy vrach; SYT'KOV, V.P., veterinarnyy fel'dsher;
ARTYUSHENYA, A.N., veterinarnyy fel'dsher.

Simultaneous protection of cattle from ixodid ticks and blood-sucking insects. Veterinariia 37 no.4:81-82 Ap'60.

(MIRA 16:6)

1. Nauchno-issledovatel'skiy veterinarnyy institut Akademii sel'skokhozyaystvennykh nauk BSSR (for Dem'yanchenko, Mordasov, Bityukov). 2. Glavnnyy veterinarnyy vrach sel'skokhozyaystvennoy inspeksii Glusskogo rayona (for Khrebtovich). 3. Glusskaya rayonnaya veterinarnaya lechebitsa (for Mayevskiy)

(INSECT BAITS AND REPELLENTS) (PARASITES—CATTLE)

PASHCHUK, A.Yu. (Khar'kov, ul. Yumovskaya, d.3); KAL'CHENKO, Yu.R.;
SYTNIK, A.G.

Use of muscle relaxants in combination with hyaluronidase preparations in orthopedic and traumatological practice; preliminary report. Klin.khir. no.9:56-59 S '62. (MIRA 16:5)

1. Anesteziologicheskoye otdeleniye (zav. - A.Yu. Pashchuk)
Ukrainskogo nauchno-issledovatel'skogo instituta ortopedii i
travmatologii imeni prof. M.I. Sitenko.

(MUSCLE RELAXANTS) (HYALURONIDASE) (ORTHOPEDIA)
(TRAUMATISM)

PASHCHUK, A.Yu., kand. med. nauk; SYTNIK, A.G.

Use of lidase in anesthesiology. Klin. khir. no.3:54-57 '65.
(MIRA 18:8)

1. Ukrainskiy nauchno-issledovatel'skiy institut ortopedii i
travmatologii imeni Sitenko.

PETROV, B.A., prof.; SYNIK, A.P.

Hundred retrosternal esophagoplasties using the large intestine.
Khirurgiia 40 no.4:37-43 Ap '64 (MIRA 18:1)

1. Institut imeni N.V. Sklifosovskogo, Moskva.

SYTNIK, G.; ROMANENKOV, P.; AZIZOV, F.; SABININ, A.

Information. Avt. transp. 41 no.8:55-58 Ag '63.
(MIRA 16:11)

1. Nachal'nik Vychislitel'nogo tsentra Nauchno-issledo-vatel'skogo instituta avtomobil'nogo transporta (for Romanenkov). 2. Nachal'nik otdela Vychislitel'nogo tsentra Nauchno-issledovatel'skogo instituta avtomobil'nogo transporta (for Azizov). 3. Chlen prezidiuma Federatsii avtomobil'nogo sporta SSSR (for Sabinin).

SYTNIK, I.

"Introduction to the Theory of Continuous Operation in the Building Industry." p. 266
(Stavební Průmysl, Vol. 3, no. 12, June 1953, Praha)

SO: Monthly List of East European Accessions, Vol. 3, no. 2, Library of Congress,
Feb. 1954, Uncl.

PASECHNIK, I.Kh.; SYTKIK, I.A.; NOGACHEVSKIY, I.I.

Phagocytic activity of leucocytes during the treatment of
experimental hepatitis with vitamin B₆. Biul. eksp. biol.
i med. 59 no.6:46-49 Je '65. (MIRA 18:6)

1. Kafedra farmakologii (zav. - prof. N.P. Skakun) i kafedra
mikrobiologii (zav. - dotsent I.A. Sytnik) Ternopol'skogo
gosudarstvennogo meditsinskogo instituta.

SYTNIK, Ivan Panteleymonovich, kand. tekhn.nauk, dots.; KHAZAN,
Moisey Yakovlevich, kand. tekhn. nauk, dots.;
KUCHERENKO, Konstantin Rodionovich, kand. tekhn.nauk,
dots.; KASPIN, Lev Abramovich, kand. ekon. nauk;
ANFIMOV, Sergey Aleksandrovich, dots.; MASALOV, Grigoriy
L'vovich, dots.; SALIVON, Ivan Ivanovich, assistent;
GIROVSKIY, V.F., doktor ekon. nauk, prof., retsenzent;
GUREVICH, M.S., ekon., retsenzent; ROTSHTEYN, A.G., kand.
ekon. nauk, retsenzent; VAYNSHTEYN, B.S., kand. ekon.
nauk, nauchn. red.; GERASIMOVA, G.S., red.izd-va;
RODIONOVA, V.M., tekhn.red.

[The economics of construction] Ekonomika stroitel'stva.
[By] I.P.Sytnik i dr. Moskva, Gosstroizdat, 1963. 229 p.
(MIRA 17:1)

ZELIKIN, M.B., kand. tekhn. nauk; SYTMIK, L.V.; KAMENSKAYA, N.P.

Preparation of silica white by the action of hydrogen chloride
on a sodium silicate solution. Report No.1. [Trudy] NICKHIM 15:
12-18 '63.

Determination of the specific surface of silica white based on
the adsorption of a dye. Ibid.:97-100

(MIRA 18:2)

BABKIN, N. (Moskva); SYTNIK, M. (Kiyev); KOMISSAROV, Yu. (g.Kaliningrad obl.)

Repaired by radio amateurs. Radio no.12:33 D '62. (MIRA 16:3)
(Television—Maintenance and repair) (Radio—Maintenance and repair)

MAN'KOVSKAYA, N.K.; SABIROVA, G.V.; Prinimala uchastiyey: SYTNIK, M.Yu.,
laborant

Use of new demulsifiers in neutralizing oils. Naft. i gaz.
(MIRA 18:11)
prom. 3:51-53 Jl-8 '65.

VASIL'YEV, V.G.; YEROFEYEV, N.S.; ANIKEYEVA, I.B.; YELIN, N.D.;
YELOVNIKOV, S.I.; KOLOTUSHKINA, A.F.; L'VOV, M.S.;
MATVIYEVSKAYA, N.D.; MIRONCHEV, Yu.P.; MODELEVSKIY, M.Sh.;
MURATOVA, A.T.; MUSTAFINOV, R.A.; ROZHKOVA, E.L.; SNEGIREVA,
O.V.; STAROSEL'SKIY, V.I.; SYTKOV, N.A.; NEVEL'SHTEYN, V.I.,
ved. red.; YASHCHURZHINSKAYA, A.B., tekhn. red.

[Prospecting for gas fields in the U.S.S.R. during four
years of the seven-year plant] Poiski i razvedka gazovykh
mestorozhdenii v SSSR za chetyre goda semiletki. Leningrad,
Gostoptekhizdat, 1963. 171 p. (MIRA 16:8)
(Gas, Natural--Geology)

KRYMSKIY, I.I.; MASSEN, V.A., inzh., retsenzenti: SYTNIK, N.A., inzh.,
red.; DEMKINA, N.F., tekhn. red.;

[Dise for foging; manufacture and adjustment] Shtampy dlia go-
riachei shtampovki; izgotovlenie i naladka. Moskva, Mashgiz,
(MIRA 16:6)
1963. 125 p.
(Dies (Metalworking)) (Forging)

NESVIT, S.M.; NYUN'KO, O.I.; SVISTUNOV, V.Ye., inzh., retsenzent;
SYTKNIK, N.A., inzh., red.

[Horizontal forging machines and their automation] GorizontaL'no-
kovochnye mashiny i ikh avtomatizatsiya. Moskva, Mashinostro-
enie, 1964. 322 p.
(MIRA 17:10)

SEVBO, Platon Ivanovich; PATON, V.Ye., kand. tekhn. nauk, otv. red.
SYTNIK, N.K., red.

[Overall mechanization and automation of welding processes]
Kompleksnaia mekhaniizatsiia i avtomatizatsiia svarochnykh
protsessov. Kiev, Naukova dumka, 1964. 86 p.
(MIRA 17:12)

TOLUBINSKIY, V.I., otv. red.; FEDOSEYEV, V.A., doktor fiz.-mat. nauk, zam. otv. red.; DORFMAN, A.Sh., kand. tekhn. nauk, red.; DUSHCHENKO, V.P., kand. fiz.-mat. nauk, red.; DYBAN, Ye.P., kand. tekhn. nauk, red.; KREMNEV, O.A., doktor tekhn. nauk, red.; NAZARCHUK, M.M., kand. tekhn. nauk, red.; ORNATSKIY, A.P., kand. tekhn. nauk, red.; PAVLOVICH, V.P., doktor tekhn. nauk, red.; SHVETS, I.T., kand. tekhn. nauk, red.; SHCHEGOLEV, G.M., kand. tekhn. nauk, red.; SHCHERBAN', A.N., akademik, red.; SYTNIK, N.K., red.

[Thermophysics and heat engineering] Teplofizika i teplo-tehnika. Kiev, Naukova dumka, 1964. 339 p.
(MIRA 18:1)

1. Akademiya nauk URSR, Kiev. Instytut tekhnichnoy teplofizyky.
2. Institut tekhnicheskoy teplofiziki AN Ukr.SSR, Kiev (for Dorfman, Dyban, Nazarchuk, Tolubinskiy, Shchegolev).
3. Kiyevskiy tekhnologicheskiy institut pi-shchevoy promyshlennosti (for Dushchenko, Pavlovich).
4. Kiyevskiy politekhnicheskiy institut (for Ornatskiy).

(Continued on next card)

TOLUBINSKIY, V.I.--- (continued). Card 2.

5. Odesskiy universitet (for Fedoseyev). 6. Kiyevskiy universitet (for Shvets). Akademiya nauk Ukr.SSR (for Shcherban', Shvets). 7. Chlen-korrespondent AN Ukr.SSR (for Tolubinskiy). 8. Gosudarstvennyy komitet Soveta Ministrov po koordinatsii nauchno-issledovatel'skikh rabot (for Shcherban').

RENNENIK, T.K., red.; SYTKIK, N.K., red.

[Flow of fluids and gases] Techeniya zhidkostei i gazov.
Kiev, Naukova dumka, 1965. 79 p. (MIRA 19:1)

1. Akademiya nauk URSR, Kiev.

SYTNIK, N.K., red.; SHALAYEVA, S.A., ml. red.

[Theory and elements of a system for sampling geo-
physical information] Teoriia i elementy sistemy otbora
geofizicheskoi informatsii. Kiev, Akad. nauk URSR, 1965.
(MIRA 19:1)
163 p.

1. Akademiya nauk URSR, Kiev.

KOZLOV, Igor' Andreyevich; BAZHENOV, Vladimir Grigor'yevich;
SYTNIK, N.K., red.

[Limiting carrying capacity of the parts of turbo-
machines] Predel'naia nesushchaia spesobnost' elementov
turbomashin. Kiev, Naukova dumka, 1965. 166 p.
(MIRA 18:5)

FILIPPOV, A.P., otv.red.; DEDUSENKO, Yu.M., red.; NAGORNAYA, N.K.,
red.; BULGAKOV, V.N., red.; SYTNIK, N.K., red.; SHALAYEVA,
S.A., mlad. red.

[Operating processes in turbomachines and the stability of
their elements] Rabochie protsessy v turbomashinakh i proch-
nost' ikh elementov. Kiev, Naukova dumka, 1965. 172 p.
(MIRA 18:6)

1. Akademiya nauk URSS Kiev. Instytut mekhanyky. Khar'kov-
skiy filial. 2. Chlen-korrespondent AN Ukr.SSR (for Filippov).

SYTNIK, V., inzh.; POPOV, V., inzh.; LARJONOW, M., inzh.

Three-dimensional bathrooms of local materials. Zhil. stroj.
no. 2:17-18 '64. (KBS 18:11)

L 27710-66 EWT(m)/EWA(h)

ACC NR: AP6003619 (A) SOURCE CODE: UR/0018/65/000/010/0118/0119

AUTHOR: Sytnik, V. (Senior engineer, Lieutenant)

23

B

ORG: None

TITLE: Installation for calibration of dosimeters |9

SOURCE: Voyenny vestnik, no. 10, 1965, 118-119

TOPIC TAGS: radiation dosimeter, radiation instrument

ABSTRACT: A simple device for calibrating dosimeters is described. The device was proposed by Reserve Lt. Col. A. L. Prigoda and was used by a military unit for calibrating roentgen-meters, radio-meters and dosimeters. A Co-60 gamma source is placed inside a spherical collimator which is made of lead and has a diameter of 320 to 360 mm for sources of 325 to 450 millicuries. The radiation did not exceed 0.4 mr/hr. The collimator is equipped with a mechanism permitting a 30-mm vertical displacement of the source inside the collimator. A system of mirrors and a graduated ruler are used for calibration. The installation is transportable and can be used under field conditions. The support table is 3900 mm long. Orig. art. has: 1 figure showing the calibration arrangement.

SUB CODE: 18 / SUBM DATE: None / ORIG REF: 000 / OTH REF: 000

Z

Card 1/1 BIG

GOLOVANOV, N., zasiuzhenny master sporta; KURILOV, I., gvardii starshiy
leytenant; SYTNIK, Yu., sportsmen-planerist 1-gc razryada
Facts, events, people. Kryl. rod. 16 no.12:20-21 D 165.
(MIRA 18:12)

LYUBICH, M.S.; SYTMIK, Z.P.; TIMOFEEVA, R.V.

Polymerocyanines. Part 1: Dimerocyanines with different nitrogen-containing heterocyclic residues. Zhur.ob.khim. 33 no.12:3979-3985
(MIRA 17:3)
D '63.

FILIPPOV, Anatoliy Petrovich. Primenai uchebnikiye FILIPPOV, Ye.G.;
SYTKIK, N.K., red.

[Vibrations of mechanical systems] Kolebaniia mekhanicheskikh sistem. Kiev, Naukova dumka, 1965. 713 p.
(MIRA 1843)

L 6914-65 EWT(m)/EWP(j) PC-4 SSD/ASD(a)-5/AFWL/ESD(gs)/ESD(t)/RAEM(t) MI
ACCESSION NR: AR4039919 S/0058/64/000/004/DI16/DI16

SOURCE: Ref. zh. Fiz., Abs. 4D893

AUTHORS: Gnevysheva, T. G.; Lifshits, E. B.; Levkoyev, I. I.;
Sytnik, Z. P.

55

TITLE: Research in the field of cyanine dyes. XI. On some poly-methine dyes from derivatives of phenyl substituted thiazolines

CITED SOURCE: Kinotekhnika, Nauchno-tekh. sb., vyp. 4, 1963, 37-53

TOPIC TAGS: organic derivative, photographic emulsion, conjugated system, dye, sensitivity increase, color film

TRANSLATION: Optical sensitizer-dyes, symmetrical carbo-, di-, and tri-carbocyanines, merocyanine derivatives of 2-ethylrhodianine and some rhodacyanines were obtained from quaternary salts 2-methyl-5-phenyl- and 2-methyl 4,5-diphenyl thiazoline. The optical properties

Card 1/2

L 6914-65

ACCESSION NR: AR4039919

of these dyes were investigated in solution and in an absorption layer on AgHal, and also in the presence of colored nondiffusing components. It is shown that phenyl groups not conjugated with the chromophor hardly influence the coloring of the dye and do not increase its tendency to formation of polymer aggregates on the AgHal surface, but greatly reduce the basicity of the thiazoline nucleus. The entry of the phenyl groups into the thiazoline cyanines and rhodacyanines reduces their sensitizing action, the degree of reduction in the case of cyanines being the larger, the longer the polymethine chain of the dye. Introduction of nonconjugated phenyl groups into the heteroresidues of the same dyes results in an increase of their component stability. Bibliography, 26 titles. For part XVIII see Abstract 4D867. A. Kartuzhanskiy.

SUB CODE: ES, OC

ENCL: 00

Card 2/2

L 6915-65 EWT(m)/EWP(j) P₂₋₄ SSD/AEDC(a)/ASD(a)-5/AFWL/ESD(gs)/ESD(t)/
RAEM(t) RM S/0058/64/000/004/D115/D116
ACCESSION NR: AR4039918

AUTHORS: Sy*tnik, Z. P.; Lyubich, M. S.; Abdullayev, A. A.; Lifshits,
E. B.; Grechko, M. K.; Vilenskiy, Yu. B.

SOURCE: Ref. zh. Fiz., Abs. 4D892

58

TITLE: Research in the series of merocyanines of azolones. IX.
Alpha-ethoxythiadimentinememerocyanins with different substitutes at
the cyclic nitrogen atoms

CITED SOURCE: Kinotekhnika. Nauchno-tekhn. sb., vy*p. 4, 1963, 54-63

TOPIC TAGS: photosensitivity, photographic emulsion, color film,
organic sensitizer, diffusion

TRANSLATION: The dye α -ethoxythiadimentinememerocyanin, used as an
optical sensitizer for the green-sensitive emulsion of negative
color film, has a shortcoming in that it diffuses relatively easily

Card 1/2

15

L 6915-65

ACCESSION NR: AR4039918

in the neighboring layers of multilayer films. To replace it by a dye free of this shortcoming, the authors have synthesized and tested the dyes thia- and α -ethoxythiadimethinemerocyanin and derivatives of thyazoleidinthion (2)-on(4) with different substitutes at the cyclic nitrogen atoms, and investigated their photographic properties. It is established that replacement of the ethyl group at one or both nitrogen atoms of the hetero-remainders by the n-butyl group, or replacement of the same group in the 3-position of rodanine residue by the phenyl group, greatly reduces the tendency of the dyes to diffusion, without appreciably influencing their color, character of sensitization spectrum, and effective action. A. Kartuzhanskiy.

SUB CODE: OP, ES

ENCL: 00

Card 2/2

SYTKNIK, Z.P.; DEYCHMEYSTER, M.V.; GLRSHTEYN, R.A.; ZHILINA, L.D.

Study in the series of merocyanines, derivatives of azolones.
Part 10: Color of the quaternary salts of dimethine merocyanines.
Zhur. ob. khim. 35 no.4:641 Ap '65.

(MIRA 18:5)

GERASHCHENKO, Oleg Arkad'yevich; FEDOROV, Vladimir Gavrilovich;
SELYAVIN, G.F., kand.tekhn.nauk,otv.red.; SYTNIK,N.K., red.

[Technique of the heat-engineering experiment] Tekhnika
teplotekhnicheskogo eksperimenta. Kiev, Izd-vo "Naukova
dumka," 1964. 161 p. (MIRA 17:7)

SYTYY, N.M., kand. tekhn. nauk

Making elliptical excavations in cohesive soil by blasting.
Transp. stroi. 12 no.1:49-50 Ja '62. (MIRA 17:2)

SYTNIK, V.I., inzh.

Study of the strength, deformability, and the relaxation of
stresses in high-strength concrete. Bet. i zhel.-bet. 8
no.7:297-302 Jl '62. (MIRA 15:7)
(Concrete--Testing)

DYRO, P.R.; KAMNEVA, Z.P.; PUSHENKO, K.D.; SYTKIK, Z.D.;
YASTREBOV, A.S.

Removal of tomato product deposits from the heating surface
of heat exchangers. Kons. i ov. prom. 18 no.12:9-10 D '63.
(MIRA 17:1)

1. Ukrainskiy nauchno-issledovatel'skiy institut konservnoy
promyshlennosti.

SYNIK, Z.P.

Chem (3)

711.534.21
1324

*microCyanine Dyes Derived from Rhodanine. II. Properties of Diamino-
merocyanines Having Various Nitrogen-Containing Heterocyclic Residues.*
M. V. DEICHMEISTER, Z. P. SYNIK and E. B. LISSINS. *J. Gen. Chem.*
U.S.S.R., 1952, 22, 166-175.—Fifteen dyes derived from rhodanine (14
dimethinmerocyanines and one monomethinoxanine containing two rhodanine
residues) and the 15 corresponding dyes from 3-ethylrhodanine are synthesised
and characterised. The second heterocyclic residue of the *merocyanine* is
varied. The absorption maximum of each *merocyanine* is compared with those
of the corresponding symmetrical cyanines, the carbocyanines corresponding
to the second heterocyclic residue, and the synthesised oxanine. It is displaced
to the shorter waves, compared with the arithmetical mean of these two values.

*Sensitivity +
Sensitometry*

to an extent that diminishes as the second heterocyclic residue becomes more
basic. All the synthesised *merocyanines* are sensitizers for silver halide emulsions,
the most effective being those with thiazole, thiazoline, and α -pyridine residues.

J. Soc. Dyers and Col.

17-3-54

ACC NR: AT6023565

(N)

SOURCE CODE: UR/3095/66/036/000/0187/0191

AUTHOR: Sytnikov, V. F.

ORG: None

TITLE: Magnetic recorder for hydrophysical research data

SOURCE: AN UkrSSR. Morskoy gidrofizicheskiy institut. Trudy, v. 36, 1966. Metody i pribory dlya issledovaniya fizicheskikh protsessov v okeane (Methods and instruments for studying physical processes in the ocean), 187-191

TOPIC TAGS: hydrologic instrument, magnetic recorder, computer research, research ship instrumentation, binary code, machine tool, computer programming, telemetry system

ABSTRACT: A magnetic recorder designed for use in a shipboard telemetry and measuring system and which will function for from 8 to 10 hours and handle a volume of information totalling $8 \cdot 10^5$ binary symbols is described. The problem requiring resolution was one of assembling the maximum possible quantity of information on a magnetic tape and determining the tape speed which would be minimum for the purpose during recording. But since computer input has to be at high speed, the requirement was for optimum speed for both recording and reproduction. The frequency method was settled on as best for controlling drive motor speed because temperature conditions were

Card 1/2

ACC NR: AT6023565

optimum. The magnetic recorder used in the shipboard system contains a 500 meter long cassette of film permitting 7 hours of operation, the recording density per millimeter of tape is 20 binary symbols, and the tape will carry almost 10^6 binary symbols. The magnetic recorder described can also be used for programming machine tools and other machinery. Orig. art. has: 1 figure.

SUB CODE: 08,09,13/SUBM DATE: None/ORIG REF: 005/OTH REF: 002

Card 2/2

ACC NR: AT6023565

(N)

SOURCE CODE: UR/3095/66/036/000/0187/0191

AUTHOR: Sytnikov, V. F.

ORG: None

TITLE: Magnetic recorder for hydrophysical research data

SOURCE: AN UkrSSR. Morskoy gidrofizicheskiy institut. Trudy, v. 36, 1966. Metody i pribory dlya issledovaniya fizicheskikh protsessov v okeane (Methods and instruments for studying physical processes in the ocean), 187-191

TOPIC TAGS: hydrologic instrument, magnetic recorder, computer research, research ship instrumentation, binary code, machine tool, computer programming, telemetry system

ABSTRACT: A magnetic recorder designed for use in a shipboard telemetry and measuring system and which will function for from 8 to 10 hours and handle a volume of information totalling $8 \cdot 10^5$ binary symbols is described. The problem requiring resolution was one of assembling the maximum possible quantity of information on a magnetic tape and determining the tape speed which would be minimum for the purpose during recording. But since computer input has to be at high speed, the requirement was for optimum speed for both recording and reproduction. The frequency method was settled on as best for controlling drive motor speed because temperature conditions were

Card 1/2

ACC NR: AT6023565

optimum. The magnetic recorder used in the shipboard system contains a 500 meter long cassette of film permitting 7 hours of operation, the recording density per millimeter of tape is 20 binary symbols, and the tape will carry almost 10^6 binary symbols. The magnetic recorder described can also be used for programming machine tools and other machinery. Orig. art. has: 1 figure.

SUB CODE: 08,09,13/SUBM DATE: None/ORIG REF: 005/OTH REF: 002

Card 2/2

VETLUGIN, F.G., inzh.; BURNASHEV, F.G., red.; GYTNYUK, G.I.,
red.

[Reconditioning damaged motor-vehicle frames by electric
welding] Vosstanovlenie povrezhdennykh avtomobil'nykh ram
elektrodugovoи svarkoi. Alma-Ata, Kazakhskii nauchno-
issl. i proektnyi in-t avtomobil'nogo transp., 1961. 33 p.
(MIRA 18:5)

SYTOV, B.K.; DMITRIYEV, B.S.; LUK'YANOV, N.P.

Plastics in shipbuilding. Inform. biul. VDNKh no.12:14-16 D '64
(MIRA 18:2)

DAVYDOV, A.S., polkovnik; KORSHUNOV, V.N., polkovnik; KOZLOV, N.D., podpolkovnik; LUKANIN, Ye.A., polkovnik; NESIN, A.A., polkovnik; POZMOGOV, A.S., polkovnik; PUTINTSEV, A.I., podpolkovnik; SIDORENKO, P.I., polkovnik; SYTOV, L.G., polkovnik; FEDIN, G.R., polkovnik; CHEREDNICHENKO, V.T., polkovnik; CHERNYSHEV, F.I., kontr-admiral zapasa; SHATURNYY, A.N., polkovnik; ROMANOV, I.M., red.

[Methodological materials for political instruction] Metodicheskie materialy k politicheskim zaniatiiam. Moskva, Voenizdat, 1965. 240 p. (MIRA 18:7)

1. Russia (1923- U.S.S.R.) Glavnoye politicheskoye upravleniye Sovetskoy Armii i Voyenno-Morskogo Flota. Upravleniye propagandy i agitatsii.

L 45076-66

ACC NR: AP6014737 /N) SOURCE CODE: UR/0229/65/000/011/0007/0014

AUTHOR: Syтов, Н. П.; Мигачев, И. Н.; Фрид, Е. Г.

12
B

ORG: none

TITLE: Soviet shipbuilding for ocean-going transport

SOURCE: Sudostroyeniye, no. 11, 1965, 7-14

TOPIC TAGS: shipbuilding engineering, cargo ship, merchant vessel data

ABSTRACT: The authors review the development of ocean-going transport ships in the USSR over the past forty years and give some details concerning the progress in transport shipbuilding. At present, the main body of ocean-going transport ships under construction consists of large-size, high-speed vessels. The building of a great number of tankers, timber carriers, and dry-cargo ships has been increased. The most important problems of the shipbuilding industry are the reduction of building costs, the decrease of the construction weight of ships, the

UDC: 629.12(09)(47)

Card 1/2

L 45076-66
ACC NR: AP6014737

use of inexpensive and wear-resistant materials and new technological processes,
and the introduction of more efficient organization in production. Photographs are
given in the original article. Orig. art. has: 29 figures. [NT]

SUB CODE: 13/ SUBM DATE: none/

Card 2/2 blg

L 47503-66

ACC NR: AP6032499

SOURCE CODE: UR/0413/66/000/017/0053/0053

INVENTOR: Utyamyshev, R. I.; Shovkolyas, A. M.; Neumyvakin, I. P.; Syrov, V. M.

ORG: none

TITLE: Electrospiograph. Class 30, No. 185436

20
B

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 17, no. 17, 1966, 53

TOPIC TAGS: human physiology, spirography, electrospiograph, respiratory physiology, respiratory system, respiration, diagnostic medicine

ABSTRACT: An Author Certificate was issued for an electrospiograph consisting of a two-channel turbine-type sensor, amplifier, signal shaper, counting circuit, and output

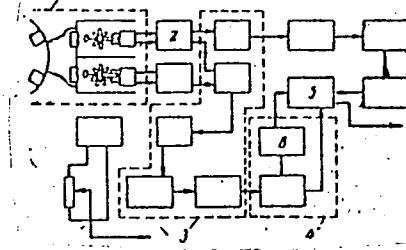


Fig. 1. Electrospiograph

1 - Sensor; 2 - amplifier; 3 - recording device; 4 - counting circuit; 5 - output stage; 6 - trigger.

Card 1/2

UDC: 615.471:612.2

L 47503-66

ACC NR: AP6032499

cascade. For more accurate and reliable measurement of the volume of inspired and expired air, and greater convenience in reading oscillogram records on which inhalation and exhalation appear on the same trace, the circuit includes an electrical device for pairing and marking adjacent pulses indicating either inspiration or expiration. This marker consists of a symmetrical trigger circuit connected through a resistance and semiconductor diode with the output emitter follower. Orig. art. has: 1 figure.

[DP]

SUB CODE: 06/ SUBM DATE: 23Jan65/ ATD PRESS: 5095

Card 2/2 vlr

YAVOYSKIY, V.I., prof., doktor tekhn.nauk; BEKTURSUNOV, Sh.Sh., inzh.;
CHERNEGA, D.F., kand.tekhn.nauk; TYAGUN-BELOUS, G.S., kand.tekhn.nauk;
DUDKO, D.A., kand.tekhn.nauk; Prinimali uchastiye: MOLOTKOV, V.A.;
BELYAYEV, Yu.P.; YAKOBSHA, R.Ya.; AGAMALOVA, L.L.; CHEKALENKO, G.A.;
BOCHAROV, V.A.; KISSEL', N.N.; POTANIN, Ye.M.; SYTOVA, N.M.

Electric slag heating and additional feed of large sheet
billets made of 10G2SD steel. Stal' 22 no.7:611-615 J1 '62.
(MIRA 15:7)

(Steel ingots)

(Rolling (Metalwork))

SYTOVA, V. A.

Fine of medusa impressions in the Lower Silurian of Podolia.
Paleont. zhur. no. 2:164-165 '62. (MIRA 15:10)

1. Leningradskiy gosudarstvenny universitet.

(Podolia—Medusae, Fossil)

L 29809-66 EWT(m)/EWP(t)/ETI/EWP(k) IJP(c) JD/HW
ACC NR: AP6020871 SOURCE CODE: UR/0383/66/000/001/0032/0034

AUTHOR: Piryanov, D. I. (Candidate of technical sciences); Khoroshilov, N. M.;
Krivenosov, Yu. I.; Timofeyev, D. I.; Shul'ga, Ye. A.; Syts'ko, A. A.

ORG: none

TITLE: Variations in the thickness of clad sheet

SOURCE: Metallurgicheskaya i gornorudnaya promyshlennost', no. 1, 1966, 32-34

TOPIC TAGS: metal cladding, sheet metal, metal rolling, metallurgical furnace, thermal conduction, steel/OKh13 steel, Kh17N13M2T steel

ABSTRACT: The authors discuss the variations in thickness of two-layer steel caused by a combination of variations and nonuniformities in the thickness of the individual slabs which make up the pack. These variations may reach +20% of the nominal value in individual cases. Variations in the thickness was determined for mass produced sheets with a cladding layer of Kh18NiOT, Kh17N13M2T and OKh13 steel. The variations in thickness and deviations from nominal value were studied during rolling of bimetal sheet from packs weighing less than 5 tons (small packs) and from packs weighing 10-12 tons (large packs). Sheet rolled from large packs shows less variation in thickness than that rolled from small packets. This is because the large slabs were hot when they were fed into the continuous furnaces and were therefore heated more uniformly. However, completely uniform heating was impossible even in three-zone continuous furnaces. The following furnace conditions are recommended

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for reducing variations in the thickness of plates rolled on the 2800 mill. Temperature of upper and lower sections in the joining zone should be identical, 1300-1310°C; temperature of the soaking zone should be 1260-1270°C. Total heating time should be divided into 40% for preheat, 30% for joining and 30% for soaking.

Experiments showed that planing the slabs on both sides reduced variations in thickness up to approximately 20%. The lubricating interlayer has a low thermal conductivity and impedes heat exchange between the upper and lower parts of the packet during heating which prevents temperature equalization. This causes variations in the thickness of the finished sheet. It was found that the absolute variation in thickness increases with the thickness of the sheets. The relative variations in thickness are approximately the same for sheets of all thicknesses with the exception of 16 mm sheets for which variations are somewhat lower. In 80% of the cases, deviations from the nominal thickness vary within limits from -10 to +12%. The following recommendations are given for reducing deviations from the nominal thickness using existing equipment: reducing variations in the thickness of initial slabs to ± 2 mm by eliminating bending or by planing on both sides; increasing thickness of the upper slab in the pack by 7% as compared with the lower slab; heating the packets in continuous furnaces with equal temperatures for the upper and lower sections in the joining zone, a temperature of 1260°C in the soaking zone and holding in this zone for 30% of the total heating time. Taking part in the work of the article were TsNIIChM specialists L. V. Meandrov, V. A. Ustimenko, A. V. Tkachev and Komunarskyy Metallurgical Plant specialists S. R. Sarkisyan and A. N. Nesmachnyy. Orig. art. has: 4 figures.

10P10
SUB CODE: 13, 11 / SUBM DATE: none
Card 2/2 PV

SYTSKO, A.V.

Using progressive methods in organizing industrial construction.
From. stroi. 37 no.6:21-26 Je '59. (MIRA 12:8)

1.Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR,
zamestitel' predsedatelya Kemerovskogo sovnarkhoza.
(Kuznetsk Basin - Metallurgical plants - Design and construction)
(Precast concrete construction)

KOTEL'NIKOV, V.A., akademik; DUBROVIN, V.M.; DUBINSKIY, B.A.; KISLIK, M.D.;
KUZNETSOV, B.I.; LISHIN, I.V.; MOROZOV, V.A.; PETROV, G.M.;
RZHIGA, O.N.; SYTSKO, G.A.; SHAKHOVSKOY, A.M.

Radar observations of Venus in the Soviet Union during 1962.
Dokl. AN SSSR 151 no.3:532-535 J1 '63. (MIRA 16:9)

1. Institut radiotekhniki i elektroniki AN SSSR.
(Venus (Planet)) (Radar in astronomy)

KURIL'CHIK, V.N.; SYTSKO, G.A.

Radio radiation from galaxies at the wavelength of 32 cm. Astron.
zhur. 42 no.3:531-536 My-Je '65. (MIRA 18:5)

1. Gosudarstvennyy astronomicheskiy institut im. P.K.Shternberga.

17(10)

SOV/177-58-7-12/28

AUTHOR: Koporulin, N.V., Colonel of the Medical Corps,
Volkov, S.I. (Deceased), Colonel of the Medical
Corps and Candidate of Medical Sciences, and Syts'ko,
I.A., Lieutenant-Colonel of the Medical Corps.

TITLE: The Development of the Callus After Closed Fractures
of Hollow Cylindrical Bones in Radiation Sickness

PERIODICAL: Voyenno-meditsinskiy zhurnal, 1958, Nr 7, pp 56-58
(USSR)

ABSTRACT: In the article the author reports on the development
of callus after a closed fracture of hollow cylindri-
cal bones in radiation sickness. Experimental rab-
bits were irradiated by means of the RUMZ-type appara-
tus. The literature on the effect of x-rays on nor-
mal and pathological tela ossea is contradictory.
Uspenskaya points out that the normal tela ossea is
very resistant to x-rays while Podlyashchuk and
Fridkin prove that the tela ossea is very sensitive
to x-rays, probably more sensitive than the skin and

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The Development of the Callus After Closed Fractures of Hollow Cylindrical Bones in Radiation Sickness

the connective tissue. Vanshteyn observed a temporary retention of the bone regeneration due to x-rays. Nikitin and Tkachenko confirm, that the healing of a simple hip fracture in animals suffering from radiation sickness takes a much slower course compared with that of normal animals. Based on his experiments, the author concludes that the formation of callus in rabbits suffering from radiation sickness is delayed during the first 5 to 15 days following fracture. A more complete immobilization of the fracture which guarantees the full confrontation of the fragments is necessary improving the development of the callus and preventing deformation of the bone. There are ^ 200 graphs, and 1 Soviet reference.

Card 2/2

SYTSKO, P.A.; TITOV, S.A.; KOSTITSKIY, I.V.; KUCHERENKO, V.S.; MATVIYENKO, B.N.

Beginning made by the Orsha track workers. Put' i put. khoz. no.9:
5-8 S '58. (MIRA 11:9)

1. Nachal'nik otdeleniya dorogi st. Orsha (for Sytsko). 2. Nachal'nik
distantsi puti st. Orsha (for Titov). 3. Nachal'nik vagonnogo uchastka
st. Orsha (for Kostitskiy). 4. Nachal'nik parovoznogo depo st. Orsha
(for Kucherenko). 5. Nachal'nik energeticheskogo otdela st. Orsha
(for Matviyenko).

(Orsha--Railroads--Track)

SYTSKO, P.A. (g. Orsha); TULUPOV, L.P., kand.tekhn.nauk (g. Orsha)

Experience in perfecting operational technology on railroads.
Zhel.dor.transp. 40 no.10:65-69 0 '58. (MIRA 11:12)

1. Nachal'nik Orshanskogo otdeleniya Belorusskoy dorogi (for
Sytsko).
(Railroads--Management)

TIKHOMIROV, I.G., prof., doktor tekhn.nauk; YUSHKEVICH, Ye.P., inzh.;
SYTSKO, P.A., inzh.)

Lengthening of hauls and possibilities of a further acceleration
of car turnover. Zhel.dor.transp. 43 no.6:17-22 Je '61.

(MIRA 14:7)

1. Zamestitel' nachal'nika Belorusskoy dorogi (for Yushkevich).
2. Nachal'nik Gomel'skogo otdeleniya Belorusskoy dorogi (for Sytsko).

(Railroads--Rolling stock) (Railroads--Traffic)

SYTSKO, P.A.; IVOGLIN, A.I., inzh.

New developments in railroad transportation services for
industrial enterprises. Zhel.dor.transn. 44 no.5:18-22
My '62. (MIRA 15:5)

1. Rektor Belorusskogo instituta inzhenerov zheleznodorozhnogo
transporta (for Sytsko). 2. Sekretar' Gomel'skogo oblastnogo
komiteta Kommunisticheskoy partii Belorussii (for Ivolgin).
(White Russia--Railroads--Freight)

~~MIL'KEM, L.A.; GUTKOVSKIY, V.A.; PODCHUFAROV, M.S.; BULANKOV, L.V.~~
~~inzh., retsenzent; NAMCHENKO, V.P., inzh., red.;~~
~~LEOTSOVA, N.D., tekhn. red.~~

[Shift crew method in the operation of locomotives;
experience of the White Russian Railroad] Smennaia ezda
na parovozakh; opyt Beloruskei dorogi. Moskva, Trans-
zheldorizdat, 1963. 56 p. (MIRA 16:12)
(White Russia--Railroads--Management)

POVOROZHENKO, Vladimir Vasil'yevich, prof.; SITNIK, Mikhail
Danilovich; SYTSKO, Petr Aleksandrovich, dots.;
MIKHAYLOV, G.I., dots., red.; NEKHAY, V.T., red.;
KISLYAKOVA, M.N., tekhn. red.

[Problems of the improvement of carrying and forwarding
services in the U.S.S.R.] Voprosy sovershenstvovaniia
transportno-ekspeditsionnogo obsluzhivaniia v SSSR; ma-
terialy. Pod red. V.V.Povorozhenko, G.I.Mikhailova.
Minsk, Izd-vo M-va vyysshego, srednego spetsial'nogo i
professional'nogo obrazovaniia BSSR, 1963. 94 p.
(MIRA 17:1)

1. Nauchno-tekhnicheskoye setevoye soveshchaniye v BIIZhT,
Gomel', 1962. 2. Zaveduyushchiy sektorom Instituta kom-
pleksnykh transportnykh problem Gosplana SSSR (for Sitnik).

SYTKO, P.A., dotsent (Gomel'); GUTKOVSKIY, V.A., kand.tekhn.nauk. (Gomel')

Potentialities for increasing the operative efficiency of locomotives. Zhel.dor.transp. 45 no.7:26-29 Jl 163. (MIRA 16:9)

1. Rektor Belorusskogo instituta inzhenerov zheleznodorozhnogo transporta (for Sytko).
(Locomotives---Performance)